



Biomass Rapid Analysis Network

Helping the emerging
biotechnology industry develop
new tools and methods for
real-time analysis of biomass
feedstocks, process intermediates,
and biomass-derived materials



What is Rapid Analysis?

- ▶ Rapid analysis is a category of modern analytical techniques that uses multivariate analysis to extract chemical information directly from spectroscopic data.
- ▶ Rapid analysis is a demonstrated technology, widely used in the food, beverage, and animal feed industries.
- ▶ Rapid analysis methods reduce the cost and increase the speed of sample analysis.
- ▶ Rapid analysis can be readily integrated with field, factory, and process automation for real-time process controls.
- ▶ Rapid analysis methods require calibration, but retain the precision and accuracy of the calibration methods.

Rapid analysis methods specific to biomass are needed for the emerging biomass conversion industry.





What Is BRAN?

The Biomass Rapid Analysis Network is designed to fast track the development of modern tools and methods for biomass analysis to accelerate the development of the emerging industry. The network will be led by industry and organized and coordinated through the National Renewable Energy Lab. The network will provide training and other activities of interest to BRAN members. BRAN members will share the cost and work of rapid analysis method development, validate the new methods, and work together to develop the training for the future biomass conversion workforce.

Why join BRAN?

- ▶ Be a technical leader in the biomass conversion community
- ▶ Work with other industry leaders to develop and validate modern analytical methods for biomass feedstocks and biomass-derived materials
- ▶ Share the cost of developing the analytical tools you need
- ▶ Lower your analytic costs
- ▶ Speed your data collection and analysis
- ▶ Gain priority access to the newest and best rapid analysis methods
- ▶ Obtain training for your current and future workforce.

For BRAN Membership and Information, contact:

Biomass Rapid Analysis Network
MS 3511

National Renewable Energy Laboratory
1617 Cole Blvd, Golden, CO 80401 USA

Fax: 303.384.6877



What will it cost to be a BRAN member?

Charter BRAN membership will be \$50,000 for year one and a smaller continuing fee for subsequent years. After the pilot phase, the BRAN Board will direct how the network will become financially self-sustaining and continue to serve its membership. The startup of BRAN with industry charter members is a pilot cost-shared by the Office of the Biomass Program of the U.S. Department of Energy.

BRAN membership benefits

The BRAN Board of Directors will establish the actual slate of benefits, but they will likely include:

- ▶ Access to one existing NREL core equation for one feedstock
- ▶ Free two-day Introduction to Biomass Rapid Analysis course for two professionals
- ▶ Free two-day specialized training course for two professionals
- ▶ Other training needed to accelerate industry development
- ▶ Technical assistance in analytical methodology and QA/QC
- ▶ Membership on the BRAN Board of Directors for the first twelve charter firms.

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BRAN Activities

- ▶▶ Rapid analysis training classes
- ▶▶ Wet chemical analysis
- ▶▶ Spectroscopic analysis
- ▶▶ Multivariate analysis
- ▶▶ Method development
- ▶▶ Consensus validation
- ▶▶ QA/QC protocols
- ▶▶ Calibration transfer
- ▶▶ Equipment demos
- ▶▶ Technical consulting
- ▶▶ On-site troubleshooting



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